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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

Donald C. Cook Nuclear Plant Unit 1
REACTOR PRESSURE VESSEL LOWER HEAD PENETRATION
INSPECTION RESULTS

- References: 1) U. S. Nuclear Regulatory Commission Bulletin 2003-02, "Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity," dated August 21, 2003.
- 2) Letter from R. P. Powers, Indiana Michigan Power Company, to U. S. Nuclear Regulatory Commission Document Control Desk, "Nuclear Regulatory Commission Bulletin 2003-02: Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity Thirty-Day Response," AEP:NRC:3054-14, dated September 17, 2003.

This letter provides a summary of an inspection of the Donald C. Cook Nuclear Plant (CNP) Unit 1 reactor pressure vessel (RPV) lower head penetrations.

Reference 1 requested that licensees provide a description of their RPV lower head penetration inspection program, and provide a summary of each inspection within 60 days of plant restart following performance of the inspection. Indiana Michigan Power Company provided a description of the CNP RPV lower head penetration inspection program in Reference 2. A summary of the inspection performed during the most recent Unit 1 outage is provided in the attachment to this letter. As described in this attachment, all penetrations were determined to

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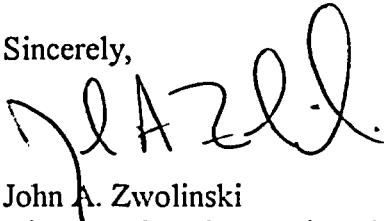
be acceptable and the lower head showed no loss of material, only minor surface corrosion with surface staining and discoloration was observed.

Portions of the activities summarized in Attachment 1 were reviewed by a member of the Nuclear Regulatory Commission (NRC) Inspection staff during the inspection. It is noteworthy that CNP and NRC staff discussed our inspection results on a "real" time basis. Issues or questions raised during the periodic discussions were resolved.

Recently, CNP identified an administrative oversight associated with the processing of an inspection summary. Specifically, the inspection summary was not formally submitted to the NRC within the 60 day period requested by Reference 1. The failure to submit the inspection summary within the requested time period has been documented in the CNP Corrective Action program.

This letter contains no new commitments. Should you have any questions, please contact Mr. Michael K. Scarpello, Supervisor of Nuclear Licensing, at (269) 697-5020.

Sincerely,



John A. Zwolinski
Director of Design Engineering and Regulatory Affairs

DB/rdw

Attachment:

- c: Director, Office of Nuclear Reactor Regulation
- J. L. Caldwell, NRC Region III
- K. D. Curry, Ft. Wayne AEP, w/o attachment
- J. T. King, MPSC, w/o attachment
- MDEQ - WHMD/HWRPS, w/o attachment
- NRC Resident Inspector
- J. F. Stang, Jr., NRC Washington DC

ATTACHMENT TO AEP:NRC:4054-04

SUMMARY REPORT
BOTTOM MOUNTED INSTRUMENTATION PENETRATION INSPECTION OF THE
DONALD C. COOK NUCLEAR PLANT UNIT 1 REACTOR PRESSURE VESSEL

A visual inspection of the Donald C. Cook Nuclear Plant Unit 1 bottom mounted instrumentation (BMI) nozzle penetrations was completed during the Unit 1 Cycle 19 refueling outage that ended November 26, 2003. This inspection was completed in accordance with Indiana Michigan Power Company's commitment made in response to Nuclear Regulatory Commission Bulletin 2003-02, "Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity," dated August 21, 2003.

The inspection was conducted by contractor personnel in conjunction with Performance Verification personnel qualified as Level 2 examiners. A pole mounted battery-powered camera was used to perform a VT-2 inspection on all 58 Unit 1 BMI penetrations, including 360 degrees around each penetration, and a VT-1 inspection of the reactor vessel area exhibiting boric acid deposit accumulation. The bottom two sections of insulation were lowered to allow unobstructed access to all penetrations and the membrane areas of the lower reactor vessel. The inspection results were recorded on VHS videotape, and copies of the video files were saved to computer drives as video clips.

Initial inspection results revealed an area of apparent boric acid flow originating above the insulation support ring and flowing toward the center of the vessel bottom. The area was located in a single quadrant and had a streaked appearance consisting of rust staining and dry crystalline deposits, presumed to be dried boric acid. All other BMI penetrations were clearly visible with no evidence of leakage or deposits in the annular gap. Chemical analyses were performed on samples of the boric acid deposits confirming the source of the material was leakage from refueling operations through the reactor cavity seal or nozzle covers in the refueling cavity prior to Unit 1 Cycle 19.

Following cleaning by warm water washing, the as-left condition of all BMI penetrations was determined to be acceptable. The vessel bottom showed no loss of material, only minor surface corrosion with surface staining and discoloration was observed.